

SECURING THE HUMAN PERIMETER: BEYOND OPERATIONAL APPROACHES TO DEVELOPING COMMUNITY CAPACITY TO LIVE WITH FIRE. TWO EXAMPLES FROM VICTORIA, AUSTRALIA

Simone Blair
Matt Campbell
Tom Lowe
Claire Campbell
Office of Land and Fire Management
Department of Sustainability and Environment
State Government of Victoria, Australia

Abstract.—This paper explores the parallels that frequently exist in fire management organizations between operational approaches to fire and engagement approaches in the community. We observe that community issues are often treated in the same way as a fire incident—“controlled” and “contained” through education and “direct attack” messaging. The aim of these approaches is to reduce uncertainty and ambiguity so that people ultimately will better understand fire risk and change their behavior. However, we argue that building community capacity to live in fire-prone landscapes should not be approached or judged in the same fashion as operational or communications activities that take place during actual emergencies. Indeed, taking a command-and-control mindset into non-hierarchical social groupings, e.g., communities when there is no emergency, can reinforce community distrust, antagonism, dependence, and complacency. We also describe two case studies that go beyond relating to communities via command and control and demonstrate effective strategies for dealing with fire-prone communities.

1.0 INTRODUCTION: THE PAST

In the past decade, the Land and Fire Management division of the Department of Sustainability and Environment (DSE) in Victoria, Australia, has begun to widen its emphasis from pursuing excellence in fire suppression to developing its expertise in long-

term strategic planning, ecological understanding, and recovery. It has done so by increasing its capability in fire ecology, fire and fuel behavior analysis, spatial technologies, and rapid recovery responses. In this sense, the organization is broadening its operational toolbox to ensure that it is as competent at Planning, Preparedness, and Recovery as it is at Response.

We argue that the operational emphasis on responsiveness in the past has also influenced the way the organization relates to communities. In the attempt to care for and protect people, DSE has attempted to “control” and “contain” engagements with people and remedy flare-ups of misunderstanding through messaging. Although these “responsive” and “reactive” ways of caring for people are still necessary *during actual incidents*, research suggests that care for people needs to be expressed differently across the Planning, Preparedness, Response, Recovery spectrum (see, for example, Sharp et al. 2009).

Hence, just as the organization looks to understand fire more holistically in an operational sense, DSE is beginning to recognize the need to more fully appreciate how people’s responses to fire are not simply about short-term bursts of attention, fear, or anger but are socially, politically, and economically constituted over the long-term. In this paper, we describe how, by broadening its emphasis on the Planning, Preparedness, and Recovery phases of the spectrum, the organization is beginning to re-conceive how it relates to the community and in the process is gaining a level of comfort with the complexity of everyday human relationships.

The authors are relatively new to working within DSE (and fire operations for that matter)—making us what you might call “privileged outsiders” (Bahktin 1993). We are privileged to be able to participate in the organization but are still new enough to be

able to reflect on, and be somewhat objective about, the changes in organizational culture that we are observing. Our paper and its framing argument draw together our own observations as outsider-participants at a time of immense change in the organization that began before the fires of February 7, 2009 and before our arrival in early 2008.

1.1 The Problems

The very nature of emergency management has traditionally dictated a strong command-and-control structure. This approach seems to suit when responding to emergencies. However, research and experience have suggested that emergency management should be viewed more broadly than response alone. Planning, Preparedness, Response, and Recovery (PPRR) form the four pillars of contemporary emergency-management approaches.

Until recent times, Land and Fire Management at DSE has had a strong operational focus. An unintended result has been a way of relating to community that displays strong parallels with operational ways of working. These operational approaches of “control” and “containment”, although appearing to be less risky in the short term, may build dependence, reduce trust, and ultimately degrade existing resilience. It is important to note that these tendencies are not limited to emergency management organizations or fire agencies; most Western approaches to governance of human or environmental systems attempt to address networked systems as if they were ordered (Holling and Meffe 1996).

2.0 DISCUSSION: GAINING CONTROL AND CONTAINING THE SITUATION

So let us now, in turn, take two conventional approaches to responding to fire and illustrate how the approaches have parallels with community engagement strategies intended to bring about behavior change.

2.1 Parallel 1 – Gaining Control

The first parallel highlights fire managers’ desire for control of an uncertain situation. In the same way that

variables and uncertainties on the fire-ground must be controlled if suppression is to be successful, members of the public, and the questions that they raise, are often viewed as flare-ups that need to be “managed” through “information saturation.”

The information-deficit approach was validated by early risk-communication research, which suggested that only people who are suitably informed about risks and options for precautionary measures are able to make appropriate decisions (Smith 2001). This approach led to the belief that by providing people with appropriate information, risk managers could bypass apparently irrational responses and induce ‘informed judgments’ or behaviors. In other words, there was an assumption that if the information was good enough, then fire agencies could increase the predictability and uniformity of people’s responses to emergencies. In-depth research has shown, however, that despite having a basic awareness (Strahan Research 2007), individuals are rarely able to achieve adequate understanding to cope with fires or the complexities of land management (Tibbitts et al. 2008, Toman et al. 2006). These findings indicate a need for an additional approach to transform awareness into behavior change.

Current research suggests that even if a hazard is well understood by members of the public, the link between this understanding and levels of preparedness is tenuous (Horlick-Jones et al. 2003, Toman et al. 2006). Therefore, treating community safety as an information-deficit problem alone:

- underestimates human capacity to respond creatively and appropriately to “system surprises”;
- fails to appreciate how social values, experience, social background, and pre-existing relationships to the information-provider lead to highly variable interpretations of information and “messaging”; and
- fails to account for the multiplicity of scenarios that individuals are faced with in an emergency.

2.2 Parallel 2 – Containing the Situation

Another example relates to a desire to “contain.” Just as we desire to contain a fire’s spread, we often attempt to contain individual interpretation, discussion within a community, and discussion between community and fire agencies. This reaction reflects a concern that discussion might lead to emotional flare-ups, people “knowing the wrong thing,” or losing control of messages. Containment actions have typically included “direct attack” approaches such as bombarding people with messages through public meetings, pamphlets, refrigerator magnets, and advertising, among other things.

Again, contemporary disaster research, communication theory, and social learning theory all argue that new knowledge must undergo a transformation process before it can be incorporated into people’s lives (Ballentyne et al. 2000, Daniels and Walker 1996, Lave 1993, Paton 2003, Wenger 1998). For interpretation and assimilation to occur, people must ask “What does this mean for me?” That is, people must filter these messages and information through their current mental models of the world, grapple with them, discuss them, and negotiate their meaning with others before finally incorporating the “message” into a new mental model. Only through this interplay of internalization and externalization can anonymous, de-contextualized, and un-contextualized messages or texts be personalized and localized.

In addition, research has shown that during emergencies, people draw on relationships characterized by trust rather than authority (Chia 2010, Taylor et al. 2009, Ulmer 2001). When fire agencies try to contain discussion within communities and between communities and organizations, they also contain the development of the relationships that people will draw on during emergencies. In command-and-control structures, care for community is expressed as a desire to take care of everything and to attempt to think for people. This way of relating to people during planning, preparedness, and recovery can inhibit the formation of trusting relationships and can create dependency or result in disengagement during an emergency.

In the past, we have considered our job done at the delivery stage of awareness-raising actions or materials, yet it is at this point that interpretation of messages, information, and engagement material begins. As the foregoing discussion highlights, it is also important to “accompany” people through this interpretive process because this is where meaning, understanding, and potential behavior change are produced. To accompany a person or a community through the interpretive process requires a new way of working.

3.0 DISCUSSION: TWO EXAMPLES OF DOING THINGS DIFFERENTLY

Two projects, commenced by DSE’s Land and Fire Management division, are beginning to re-envision the relationship between the division and the Victorian community. These processes are as much about organizational change as they are about building community capacity to live with fire. The first describes research to improve the Fire Operations Planning (FOP) process. The second describes the development of a Fire Learning Network across the state of Victoria.

3.1 A New Way of Conducting Community Engagement for Fire Management Planning

In the past 10 years, several post-fire incident reports and inquiries highlighted DSE’s failure to adequately engage in public consultation during fire suppression activities and in preparing strategic fire-management plans. The FOP process—a listing of proposed planned burns and fuel reduction works that requires a 6-week period to actively seek public comment—was selected as the means for engaging the Victorian community about fire management on public land. “Community meetings” were decided on as the method of engagement and consultation.

Recently, DSE commissioned social research (led by one author) to explore the effectiveness of the FOP process. The research (Ipsos-Eureka 2010) highlighted that while DSE staff’s efforts in conducting the FOP engagement were often successful, there remained a need to improve the overall design and scope of this

vitaly important collaborative planning tool. Research identified a lack of direction and guidance around engagement goals and approaches that had resulted in staff members' falling back on traditional ways of working—command-and-control style approaches that applied “information-deficit” models to a collaborative planning tool. The authors' observations of interactions between staff and community, comments from community members, and comments from DSE staff suggest that many people consequently perceived the organization as unapproachable.

In some cases, efforts have been made to foster relationships with interest groups and stakeholders. A lack of guidance, experience, and value placed on skills for facilitating such relationships, however, caused negative experiences, frequently leading staff to resume a position of authority. This outcome shifted the balance of power and trust and closed the door to truly collaborative management.

This research also showed that because of the prevailing information deficit approach, much of the informal relationship building work that staff do in their local communities—such as chatting with people in the forest, at the post office, on the way to the depot, or at a BBQ—is not recognized and as such cannot be measured within current frameworks. For this reason, much of the good work that occurs remains unknown to the organization.

The research highlighted the need to expand the scope of engagement activities used by land and fire managers to take into account the diversity of “community” needs and redress the balance of power and trust. DSE senior managers now recognize the important role that good engagement can play and they are keen to facilitate changes in staff members' attitudes and skill sets. The recognition that the organization, too, must change is evidence that DSE is beginning to go beyond the command-and-control paradigm in planning, preparedness, and recovery modes of fire management.

3.2 A New Approach to Relationships and Knowledge-Sharing: A “Fire Learning Network”

Since 2008, the division has also been developing a state-wide Fire Learning Network. Though the need for this approach was inspired by the Nature Conservancy's network of the same name in the United States, the DSE network has many differences.

The DSE Fire Learning Network is composed of multiple localized community groups that, at times, are connected at a state level. The groups are not formalized, but they are characterized by a process of open, facilitated conversations guided by strategic questioning. Importantly, the concept of “a strategic conversation about fire” is holistic and accommodates what the group cares to talk about at that time. As such, fire is the entry point to a whole range of associated community concerns, hopes, and values (Blair et al. 2010, Campbell et al. 2010).

“Community” is defined as *anyone*. Therefore, a conversation may include fire agency staff and volunteers, local residents, or interest groups. It is important to note that at Fire Learning Network conversations, we meet as people first but also acknowledge that our experience, relationships, and roles may provide us specific knowledge of the issue. This realization ensures that new skills and knowledge (especially specialized knowledge) can enter the conversation in a non-patronizing fashion, underscoring the learning network's principle that *we all have something to learn and something to share*.

A strategic conversation is intended to increase social resilience by building relationships within the group and at the same time elucidate, value, and share knowledge that emerges from the group. Conversations take place intermittently through the year (at times and locations determined by the membership). In this way, learning from others is cumulative and, as relationships develop, information is negotiated, tested, and incorporated into participants' lives. This approach emphasizes the capacity that we all have to learn, care, and contribute.

This approach to learning and knowledge transfer is quite different from the knowledge-deficit model, where the organization predetermines what the community should learn and controls the interpretation of information by eliminating space for ambiguity, discussion, and varied interpretation. By contrast, the learning and relationship “outcomes” of connected strategic conversations and the learning network they form, are emergent—they cannot be predetermined and will depend on the group’s unique strengths, interests, and experiences.

Three authors of this paper lead this project and act as the principle facilitation team—facilitating both conversations and the network of relationships that support them. One community we work with was initially very keen to put together a “community fire plan”—a document that informed people of what they should do in the event of a threatening fire, given the local context. Instead of trying overtly to control this concept or withdrawing from dialogue about it, fire agency staff explored the idea in facilitated conversation, with different staff members as equal participants. The group began by talking about the need for government to deliver various types of new infrastructure—for example, mobile phone towers and community fire shelters. After two conversations over 3 months, however, the group began to question its own logic, asking reflexive question such as, “Who is in this community and what do they know?” and “Is it realistic to expect new infrastructure for next fire season?”

Group members began to think that in order to create a community fire plan, it was important to know their own community and to understand the complex environment of those for whom they were creating this plan. The concept of “producing a community survey” emerged, with some in the group feeling that even just completing the survey would build fire awareness in their community. A smaller number of people volunteered to collect the surveys personally so that in the process they could connect with others and engage respondents in a personal conversation about fire preparedness, concerns, and hopes.

The conversation in this location is ongoing, but as a result of the process so far, clear and meaningful outcomes include:

- the formation of community “working bees” to help elderly residents prepare their blocks;
- the initiation of three community Fireguard groups;
- the development of a community fire newsletter;
- locally organized dialogue as a response to a planned burn that broke containment lines or “spotted over”;
- comments about the positive social interactions stemming from these conversations. Perhaps more important than the preceding outcomes is the development of relationships that emerge from the meetings. People reported to us that—to paraphrase— “these conversations have such a good feeling that for the first time I feel like I’m really connected to other people,” “I met my neighbour tonight and we’ve discussed our fire plans together,” and “Mum and I have been thinking a lot about what to do and now we’ve decided that on any catastrophic days we’ll be booking a room at a hotel.”

As social scientists and fire agency employees, we could have directed people to undertake a community survey, rather than waiting for the idea to emerge at its own pace. This attempt at control may have resulted in a better-designed and -implemented survey, but it would have led to a process that no longer had any meaning for the community.

Recently, a planned burn broke containment lines in this community. Hours later a community meeting was held to discuss what was happening. Remarkably, this meeting was co-facilitated by a community member involved in the strategic conversations. DSE staff members later described how constructive and easy the discussion was. They felt that understanding and trust were high enough to be able to talk about what had happened—whereas, in the past, relationships between the community and organization (particularly in relation to burning) had been very difficult.

Recent conversations have turned from personal safety to matters of fire ecology—how the forest recovers from fire. This development and maturation of knowledge and discussion illustrates how a non-controlling process can develop people's understanding of complex phenomena at a natural pace. In addition, the self-reported development of intra-community relationships shows how taking a non-hierarchical or network approach into a social setting that is itself non-hierarchical facilitates the strengthening of relationships in a familiar way.

4.0 DISCUSSION: WHAT IS UNIQUE ABOUT THESE NEW WAYS OF WORKING?

While on the surface these activities may continue to be described as community engagement, much of their uniqueness lies in the deliberate and authentic repositioning of ourselves (i.e., fire agency staff) from people who deliver a project with defined and expected outcomes to people who:

- accept that benefits are emergent, and cannot be strictly predetermined;
- are affected by the process;
- learn from and adapt according to local action and experience;
- believe in the capacity of others to respond to the life issues they face; and
- trust others in the face of ambiguity.

In most situations where change is desired, an intervention is introduced and it is hoped that the desired change occurs. The most significant element of individual, family, and community change is the formation of meaning—answering the question, “Why is this important to me/us?” It is in the process of answering questions like this that information is given meaning and existing information and experience become knowledge. Most community engagement initiatives do not prompt people to reflect on this question, nor do they accompany people through the process by which information becomes understanding. The two example projects intentionally reposition interactions between DSE staff and community as

reciprocal. In addition, the learning network provides a deliberate space where the processing of making meaning can take place through strategic conversation.

5.0 CONCLUSIONS

By relinquishing much of the control that is traditionally exerted by fire agencies, and frequently anticipated by the public, the approaches described reorganize the rules of engagement by positing land management agencies as learners within communities rather than as deliverers of information or arbiters in consultation processes.

The practice and experience of developing a Fire Learning Network and the findings of DSE's community engagement research lead to a similar conclusion: that changing how “we” as an organization and “we” as a community relate will need time, support, and mentoring. An organization cannot simply charge staff with using new engagement methodologies or communication tools and expect behaviors and ways of relating to change. Similarly, organizations cannot simply give booklets or lectures to a community and expect the profound changes in behavior that are hoped for.

Land and fire management is moving beyond traditional response strategies of relating to people. Going beyond operational approaches will mean that fire managers must shift their behavior, language, and reactions to uncertainty as they alternate between PPRR contexts. A move beyond an operational approach to working with people toward one of true capacity development requires us to trust the capacity of others, and learn how to value less tangible outcomes such as relationships and understanding. It will mean that managers must become more willing to trust communities, allowing them to solve problems at a natural pace and sometimes make mistakes, and to change the ways we measure success. In this way, people can truly own an understanding of fire and integrate this understanding into their lives.

6.0 LITERATURE CITED

- Bahktin, M. 1993. **Toward a philosophy of the act.** Translation and notes by Liapunov, V.; Holquist, M. and Liapunov, V., eds. Austin, TX: University of Texas. 132 p.
- Ballantyne, M.; Paton, D.; Johnston, D.; Kozuch, M.; Daly, M. 2000. **Information on volcanic and earthquake hazards: The impact on awareness and preparation.** Report No. 2000/2. Wellington, Institute of Geological and Nuclear Sciences Limited Science.
- Blair, S.; Campbell, C.; Campbell, M. 2010. **A case study of a strategic conversation about fire in Victoria, Australia.** Fire Research Report number 79. Melbourne, Australia: Department of Sustainability and Environment.
- Campbell, C.; Blair, S.; Wilson, A.A.G. 2010. **Adaptive management: The role of a learning network.** Fire Research Report number 76. Melbourne, Australia: Department of Sustainability and Environment.
- Chia, J. 2010. **Engaging communities before an emergency: Developing community capacity through social capital investment.** The Australian Journal of Emergency Management. 25(1): 18-22.
- Daniels, S.; Walker, G. 1996. **Collaborative learning: Improving public deliberation in ecosystem-based management.** Environmental Impact Assessment Review. 16(2): 71-102.
- Holling, C.S.; Meffe, G.K. 1996. **Command and control and the pathology of natural resource management.** Conservation Biology. 10(2): 328-327.
- Horlick-Jones, T.; Sime, J.; Pidgeon, N. 2003. **The social dynamics of environmental risk perception: Implications for risk communication research and practice.** In: Pidgeon, N.; Kasperson, R.E.; Slovic, P., eds. The social amplification of risk. Cambridge, UK: Cambridge University Press. 262-285.
- Ipsos-Eureka. 2010. **Innovation in community engagement for fire operations planning, findings from collaborative workshops.** Prepared for: Department of Sustainability and Environment Ipsos-Eureka. February 2010.
- Lave, J. 1993. **The practice of learning.** In: Understanding practice: Perspectives on activity and context. Cambridge, UK: Cambridge University Press: 3-32.
- Paton, D. 2003. **Disaster preparedness: A socio-cognitive perspective.** Disaster Prevention and Management. 12(3): 210-216.
- Sharp, E.; Thwaites, T.; Millar, J.; Curtis, A. 2009. **Factors affecting community-agency trust in bushfire management: Community member perspectives.** Institute for Land, Water and Society report 51. Albury, Australia: Charles Sturt University.
- Smith, K. 2001. **Environmental hazards: Assessing risk and reducing disaster.** 3rd edition. London, UK: Routledge. 420 p.
- Strahan Research. 2007. **Research for the Victorian Country Fire Authority on community attitudes to bushfire safety prior to 2007/08 summer season.** CFA. November 2007.
- Taylor, K.; Priest, S.; Fussell Sisco, H.; Banning, S.; Campbell, K. 2009. **Reading Hurricane Katrina: Information sources and decision-making in response to a natural disaster.** Social Epistemology. 23(3-4): 361-380.
- Tibbits, A.; Handmer, J.; Haynes, K.; Lowe, T.; Whittaker, J. 2008. **Prepare, stay and defend or leave early: Evidence for the Australian approach.** In: Handmer, J.; Haynes, K., eds. Community bushfire safety. Victoria, Australia: CSIRO Publishing: 59-76.
- Toman, E.; Shindler, B.; Brunson, M. 2006. **Fire and fuel management communication strategies: Citizen evaluations of agency outreach activities.** Society and Natural Resources. 19(4): 321-336.

Ulmer, R. 2001. **Effective crisis management through established stakeholder relationships.** Management Communication Quarterly. 14(4): 39-42.

Wenger, E. 1998. **Communities of practice: learning meaning and identity.** Cambridge, UK: Cambridge University Press. 336 p.

The content of this paper reflects the views of the author(s), who are responsible for the facts and accuracy of the information presented herein.